

ENVIRONMENTAL MEMORANDUM

Red Chris Development Company Ltd.
200–580 Hornby Street, Vancouver, BC V6C 3B6

Date: August 11, 2015

Distribution: Red Chris Monitoring Committee

From: Blaine Lindstrom, Environmental Technician;
Jack Love, Environmental Superintendent

Re: Red Chris Monitoring Committee Environmental Report Jul 28 – Aug 11, 2015

Weather:

Temperatures range from 3°C to 15°C. Most days have had overnight rain with some drizzles throughout the morning and sun in the afternoons. Heavy rain occurred on the 2nd and 4th of August. The heavy rain had made some roads in the TIA very muddy. However, they remain drivable. There were many sunny days in the second half of the shift.

Construction Activities:

- Mining, drilling, and blasting in the pit.
- Dam construction, till borrowing, and drilling of pumping wells in the TIA.

Spills and Incidents:

- July 31, 2015; 4L waste oil spill: in maintenance laydown in the TIA. The spill was cleaned up immediately and disposed of properly.
- Aug 3, 2015; motor oil spill: Two septic trucks had begun leaking
- Aug 3, 2015; brake oil spill: a hydraulic hose under the cab of a rock truck had blown spilling approximately 1L in the TIA. Contaminated material was collected and disposed of as per protocol.
- Aug 8, 2015; hydraulic/fuel spill: Approximately 8L leaked out of a stinger truck when it had tipped over. Fortunately, no one was hurt in the incident.

Waste Management:

- New signs for waste area have been put up and should help make things clearer for disposing of waste.
- Lots of cardboard and wood had been backed up in the burn pit during the fire ban. When the pit became full people began to deposit wood and cardboard into one of the construction waste bins. As of the 11th of August the bins still haven't been cleaned out.
- Improvements have been made to the burn pit. The berms have been repaired and built up higher, the pit has been deepened, and a new ash pit has been built for ash from the incinerator.
- Water samples were collected from the lagoon waste water at W74, which is the discharge to the wetlands, and sent to the lab for analysis.
- The lagoon's UV disinfection system has been activated now that the lagoon water being discharged is in compliance.
- Site services has collected contaminated soil from around site and deposited it into the new bermed structure. They've especially been busy with the soil at the erection pad where all the waste oil cubes are stored.

Water Management:

- The transducer for the tailings pond has been reinstalled. With the new set up it should be much easier to recover the data and the transducer when the water level rises too high.
- Bi weekly sampling of the tailings pond, weirs 1 & 2, and W69 have been collected and sent to the lab for analysis.
- Quarterly groundwater samples of 4 wells have been collected and sent to the lab for analysis.
- Water drainage near the crusher on the haul roads has become a problem. A plan for a proper

drainage system has been determined and will soon be put into place.

- Water from the large creeks on the main access road at km 0 and 8 had begun to erode away at the bridge abutments. Small gravel and dirt was pulled back and replaced with large rocks to better shield against the water.

Air Quality, Soil and Snow:

- Quarterly dust samples have been collected and sent to a lab for analysis.

Wildlife:

- Bear awareness training has become mandatory for all personnel on site. Most crews have been covered so far and the environmental department will work on getting the rest in the near future. The short film "Staying Safe in Bear Country" is being used.
- Bear sightings have not been reported as much as in July, although one was on the edge of the pit and is seen from time to time. They may have all gone to the berry patch. No reports on moose. A great horned owl was spotted in the south TIA sleeping on a branch next to the access road.

Upcoming Activities and Follow Up:

- Fish surveys in both Kluea and Ealue Lake.
- Environmental Effects monitoring begins August 25th.
- Environmental inspectors are due to arrive on site on the 11th.

Additional Photos:



July 30 The new transducer in the tailings pond.



July 30 Contaminated soil at the erection pad.



July 31 Reworking the abutments at Jackson Creek, near the gate.



July 31 Reworking the abutments on the bridge at 8km on the main access road.



Aug 2 Wood & cardboard in the construction waste bin the bin was resorted.



Aug 3 Motor oil spill from the septic truck.



Aug 3 More oil from the septic truck spill.



Aug 5 New signs for the waste area.



Aug 5 The bentonite and other drill cuttings have been removed form upstream of weir 3.



Aug 5 A great horned owl seen on the old TIA access road.



Aug 8 Drill cuttings north of the reclaim dam has made its way downstream into Quarry Creek. Additional sumps and catchments were installed to contain cuttings.



Aug 8 Although it's hard to see in the picture, there is a slight milkiness to the water from the drill cuttings at W69 water sample site.



Aug 9 Drill cuttings immediately downstream of the drillers.



Aug 9 Straw bale check dams have been put into place to help settle out the cuttings from the water.



Aug 8 An unknown red substance has somehow mixed with some groundwater that's coming out of the ground behind the drinking water well for the pit shop.



Aug 8 The pink water just ends here and is visible nowhere else.



Aug 8 A stinger truck had tipped. A sump for oil had been dug in case a lot of oil was released.



Aug 9 A new sign for the burn pit.



Aug 9 Lots of waste oil cubes at the erection pad had been cut open over the years and left to collect water. This has made cleanup difficult.